

ABSTRACT

A system may place nodes (110) within a non-biconnected network (100) that includes multiple interconnected nodes (110) to achieve biconnectivity within the network (100) and transform the network (100) from a non-biconnected one to a biconnected one. A non-biconnected network is one that necessarily becomes partitioned into two or more disconnected networks if a node in a critical position (termed a "cutvertex" node) should fail or otherwise become unavailable. A biconnected network is one that includes at least one additional network link (sometimes termed an "edge") between nodes belonging to each of the otherwise potentially disconnected networks for the purpose of maintaining network communication therebetween if and when the cutvertex node fails or otherwise becomes unavailable. To achieve biconnectivity, the system may identify one or more nodes (110) to move and determine the direction and distance to move the one or more nodes (110). The system may then move the one or more nodes (110) in the determined direction and distance to transform the non-biconnected network (100) to a biconnected one.